

REMARKS

In the Office Action mailed April 10, 2002, Claims 1-5 and 7 were rejected under 35 U.S.C. Section 112, second paragraph as indefinite. Further, Claim 1 was rejected under 35 U.S.C. Section 103(a) as unpatentable over Andrews (4591341) in view of Bergersen (3950851). Claims 2-5, 12-31, and 33-38 were rejected under 35 U.S.C. Section 103 (a) as unpatentable over Andrews in view of Bergersen and Kurz (4348178). Claims 6-11 were rejected under 103(a) as unpatentable over Andrews in view of Kurz. Claim 32 was rejected under Section 103(a) as unpatentable over Andrews in view of Bergersen and Kurz and further in view of Andreiko (5454717). Claims 1-32 were rejected under Section 103(a) as being unpatentable over Andrews (4591341) in view of Chishti (5975893).

In response, the Claims have been amended. In view of the amendment and the arguments below applicants respectively submit that all Claims and conditions for allowance.

Section 112 Rejection

Claims 1, 2, and 7 have been amended. Applicants respectfully submit that the amendment over come Section 112 rejection.

Section 103 Rejection

Claim 1 was rejected under Section 103(a) as being unpatentable over Andrews in view of Bergersen. The Claims have been amended to show a plurality of appliances.

Applicants respectively submit that in view of the amendment, Claim 1 is patentable over Andrews and Bergersen.

Claim 2-5, 12-31 and 33-38 were rejected under Section 103(a) as unpatentable over Andrews in view of Bergersen and Kurz. Kurz relates to an appliance with a tooth positioner mouthpiece and an electric motor mounted on an oral bowl of the orthodontic headgear and mechanically coupled to the mouthpiece for introducing vibrations into the mouthpiece. Kurz discloses that the "pair of elongated metal elements 22 and 24 extend through the mouth piece 16 from the motor 10, so that the ultra-sonic vibrations established by the motor may be transmitted to the mouth piece. The metal vibrational elements 22 and 24 are embedded between the upper and lower teeth impressions in the mouth piece 16. The vibrational elements

are positioned in the mouth piece during the construction thereof. They are directly connected to the ultra-sonic vibration motor 10 which is mounted on the bow 12.” Kurz at Col. 2, lines 33-42.

There is no teaching and one skilled in the art would not have applied Kurtz’s vibrational wire that is embedded in the middle of a mouthpiece to the claimed polymeric appliances. In this case, there is no space to embed metal vibrational elements between the upper and lower teeth appliances.

Further, as an independent basis for overcoming the Section 103 rejection, there is no teaching of combining the plurality of digitally shaped appliances, each having a geometry selected to reposition the teeth from a first arrangement to a second arrangement, with one or more wire and bracket systems.

The operation of the shells is completely different from the operation of Kurz, and Applicant submits that Andrew, Bergersen and Kurz cannot render obvious the claim invention. Withdrawal of the rejection is respectfully requested.

Claims 6-11 were rejected under Section 103(a) as unpatentable over Andrews in view of Kurz. Here, neither Andrews nor Kurz shows the claimed specifics of appliances comprising polymeric shells having cavities and wherein the cavities of successive shells have different geometries shaped to receive and resiliently reposition teeth from the first to the second arrangement. Therefore, Andrews and Kurz cannot render obvious claims 6-11. Withdrawal of the rejection is respectfully requested.

Claim 32 was rejected under Section 103(a) as unpatentable over Andrew in view of Bergersen and Kurz and further view of Andreiko. Applicants respectively submit that Claim 32 is allowable since it depends on an allowable claim.

Finally, Claims 1-32 were rejected under Section 103(a) as unpatentable over Andrews in view of Chishti (5975893). Applicants respectively submit that there’s no teachings to combine and to modify Andrews to include using a plurality of successful polymeric shells and hence there’s no motivation to combine the two references. Therefore, Claims 1-32 are patentable over Andrews and Chishti. Withdrawal of the Section 103 rejection is respectfully requested.

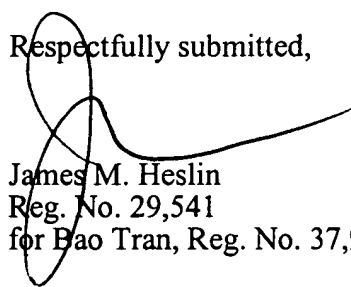
MILLER, ROSS
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PATENT

Attached is a marked-up version of the changes made by the current amendment. The attached page is captioned with "VERSION WITH MARKINGS TO SHOW CHANGES MADE."

If for any reason the Examiner believes that a telephone conference would in any way expedite prosecution of the subject application, the Examiner is invited to telephone the undersigned at 650-326-2400.

Respectfully submitted,



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VERSION WITH MARKINGS TO SHOW CHANGES MADE

1. (Amended) A system for repositioning teeth from an initial tooth arrangement to a final tooth arrangement, said system comprising a plurality of dental incremental position adjustment appliances including:

[one or more] a plurality of digitally generated appliances, each having a geometry selected to reposition the teeth from a first arrangement to a second arrangement, wherein the appliances comprise polymeric shells having cavities and wherein the cavities of successive shells have different geometries shaped to receive and resiliently reposition teeth from the first to the second arrangement; and

one or more wire and bracket systems to progressively reposition the teeth from one arrangement to a successive arrangement, the wire and bracket systems and appliances being deployed in seriatim to reposition teeth from the initial tooth arrangement to the final tooth arrangement.

2. (Amended) A system as in claim 1, wherein the tooth positions defined by [the] one or more cavities in each successive appliance differ from those defined by the prior appliance by no more than 2 mm.

7. (Amended) A method as in claim 6, where the tooth positions defined by [the] one or more cavities in each successive appliance differ from those defined by the prior appliance by no more than 2 mm.